

Rhododendron lapponicum

Lapland rosebay

Status

Federal status: G5 N?, Not listed

NH state status: S2, Candidate

ME state status: S1, Threatened

Flora Conservanda Division 2, regionally rare taxa with fewer than 20 occurrences in New England. All New Hampshire occurrences are extant, but with little or no details on number of plants, condition, or trend. No indication of whether Maine historic occurrences have been revisited, so no way to determine if they represent a decline.

The expert panel estimated the range-wide and WMNF viability at outcome B currently and C in the next 20 years. The expected decline is because it is not widely distributed relative to its habitat and current limiting factors are likely to continue or increase. Recreation impacts will probably increase in the next 20 years, but so will public awareness, which may mitigate some impacts.

Distribution

This species is circumboreal, extending to southern Canada from Nova Scotia to British Columbia, and into the high mountains of Maine, New Hampshire, and New York, rarely west to central Wisconsin.

In New Hampshire it is known from Sargents Purchase, Thompson and Meserve, Low and Burbanks, and Chandlers Purchase, all in the WMNF. In Maine, it is only known from Mt. Katahdin.

Habitat

This species is strongly associated with dry-mesic heath communities in the alpine. *Rhododendron lapponicum* prefers slightly more sheltered locations than *Diapensia lapponica*, but can withstand a range of conditions. It is a dominant species in the Diapensia and Diapensia-azalea-rosebay dwarf shrubland communities, and occurs in other alpine communities. Tolerant of dessication, it occurs on well-drained, thin, acidic, gravel-stony soils. It does not grow on rock outcrops.

The expert panel placed it in the dry/mesic heath meadow system of alpine communities. Habitat features that are important in providing viability of the dry/mesic heath meadow system include those factors associated with exposure to the elements, especially in winter. The key factors are cold, wind, and snow and ice blast. Other factors include dry to mesic moisture conditions, well-drained sites, thin acidic soils, desiccation, and low nutrient tolerant plants. Wind is likely to reduce competition from other species that are not adapted to survive in a harsh environment.

Limiting Factors

Local experts believe that the threats to this species are the same as the threats to the dry/mesic heath meadow system. Human disturbance is the primary threat to the dry/mesic heath meadow system. Hiker pressures to the system include direct trampling

along trails and in areas without trails, typically ridges and peaks, where hikers go “view seeking.” As a result, this system is at greater risk on “lesser summits,” where use and plants are concentrated in a small area, than in the Presidential Range.

If there is any alpine plant threatened by collection, this is it.

Global warming and acid deposition may be a threat to the dry/mesic heath meadow system, but the threat is uncertain at this time and is likely minor compared to other factors, such as hiker pressures.

Viability concern

Prefers slightly more sheltered habitat than *Diapensia* and *Loiseleuria*, so they would not be appropriate surrogate species. WMNF contains 100% of NH population. More narrowly distributed than many other alpine species, so there is greater potential for risk in future.

Management activities that might affect viability

The activity with potential to impact this species that the WMNF has some control over is trampling by hikers. Management that would reduce the density of trails in the alpine zone and help keep hikers on designated trails, especially near “lesser summits,” would reduce the potential for trampling.

Trail construction or other development in the alpine zone could affect this species if it would directly impact dry-mesic heath habitat or increase human traffic near suitable habitat. Trail maintenance activities could alter habitat suitability or directly impact individuals.

Reminding people not to collect alpine plants could reduce potential impacts from collection.

References

Bliss, L. C. 1963. Alpine plant communities of the Presidential Range, New Hampshire. *Ecology* 44:678-697.

Gleason, H. A. and A. Cronquist. 1991. Manual of vascular plants of northeastern United States and adjacent Canada, 2nd edition. The New York Botanical Garden, Bronx, New York.

Haines, A. and T. F. Vining. 1998. Flora of Maine, a manual for identification of native and naturalized vascular plants of Maine. V. F. Thomas Co., Bar Harbor, Maine.

NatureServe: An online encyclopedia of life [web application]. 2001. Version 1.5. Arlington, Virginia. The Association for Biodiversity Information. Available: <http://www.natureserve.org/>. (Accessed: October 22, 2001).

Sperduto, D. D. and C. V. Cogbill. 1999. Alpine and subalpine vegetation of the White Mountains, New Hampshire. New Hampshire Natural Heritage Inventory, Concord NH. Submitted to the USDA Forest Service, White Mountain National Forest, Laconia, NH.

SVE. 2002. GMNF/WMNF Species Viability Evaluation expert panel on alpine plants. Panel held: May 13-15, 2002, Rutland, Vermont.